TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
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1955 Forest Tree Seed Crop Generally Fair in the Lake States

During 1955 forest trees in the Lake States produced seed crops averaging a little poorer than in 1954 but roughly equal to most other years since 1950, according to observations made at field centers of the Lake States Forest Experiment Station. In general, most conifers produced fair to good seed crops in northern Minnesota and northeastern Wisconsin, poor to fair crops in central Upper Michigan, and fail to poor crops in the Lower Peninsula of Michigan (see table on reverse side). Red pine had the poorest seed production among the conifers. White spruce approached bumper crop proportions in parts of northern Minnesota. Among the hardwoods, basswood and paper birch were fairly consistent good seed producers, although American elm and red maple in northeastern Wisconsin had the only bumper crops. White oak and American beech in Lower Michigan had the only seed crop failures among the hardwoods.

In northern Minnesota all species reported, except red pine, produced good seed crops in some localities. Red pine seed production ranged from failure to poor. White pine, balsam fir, and quaking aspen had poor crops in some localities. The white spruce crop, however, approached bumper production in two localities.

In northeastern Wisconsin and generally throughout northern Wisconsin, all conifers had good seed crops except red pine (failure), white pine (poor), and jack pine (fair). All hardwoods also produced good or bumper seed crops, with the exception of white ash (poor), sugar maple (fair), and red oak (fair).

In southwestern Wisconsin, of the three species reported, two had bumper crops (shagbark hickory and white oak) and one had a poor crop (red oak).

In central Upper Michigan, white pine was the only species with good seed production; the black spruce seed crop failed; balsam fir, hemlock, and basswood produced fair crops; and all other species had poor seed crops.

In the Lower Peninsula of Michigan, sugar maple, pignut hickory, and black walnut were the only species to produce good seed crops. Red maple, American elm, northern pin oak, and black oak produced fair seed crops. All other species reported had poor or failed crops.

Most seed collectors are interested chiefly in the pines and spruces. For their purposes, 1955 was a moderately good year in northern Minnesota and northern Wisconsin, but a poor year in Michigan. From the standpoint of natural reproduction, seed production in general was ample in the northern parts of Minnesota and Wisconsin, but deficient in most of Michigan. The supply of acorns for wildlife species should be favorable in northern Minnesota oak areas, but deficient elsewhere in the region.

January 1956 PAUL O. RUDOLF, Forester.

MAINTAINED AT ST. PAUL 1, MINNESOTA, IN COOPERATION WITH THE UNIVERSITY OF MINNESOTA

Forest tree seed crops in the Lake States, 1955

Species	Estimated percentage of a full crop[1] in--			
	Northern Minnesota	Northeastern Wisconsin[2]	Central Upper Michigan	Lower Peninsula Michigan
Red pine	7-25	7	3/--	7
Eastern white pine	35-75	25	75	4/7-25
Jack pine	50-75	50	--	--
White spruce	50-92	75	25	25
Black spruce	75	75	7	--
Norway spruce	--	75	--	--
Balsam fir	25-75	75	50	--
Eastern hemlock	--	75	50	--
Northern white-cedar	75	75	25	--
Tamarack	--	75	--	--
Sugar maple	75	50	25	75
Red maple	--	95	25	50
American beech	--	--	25	7
Basswood	75	75	50	--
Yellow birch	--	75	25	--
Paper birch	75	75	--	--
Quaking aspen	25-75	75	--	--
Bigtooth aspen	--	75	--	--
American elm	--	95	25	50
White ash	--	25	--	--
Black ash	--	--	25	--
Bur oak	75	--	--	--
Northern pin oak	75	--	--	50
Black oak	--	--	--	50
Northern red oak	75	50	--	25
White oak	--	--	--	7
Pignut hickory	--	--	--	75
Black walnut	--	--	--	75

1/ Percentages of a full crop are classified as follows:

0 - 15, failure
16 - 35, poor
36 - 60, fair
61 - 90, good
91 - 100, bumper

2/ Reports from southwestern Wisconsin for three species are as follows: Shagbark hickory and white oak, 95 percent crop; and northern red oak, 25 percent crop.

3/ (--) signifies no report on this species.

4/ The fail crop was reported in the south half of the Lower Peninsula; the poor crop in the north half.